RELATIONSHIP BETWEEN SELF-REGULATED LEARNING STRATEGIES AND ACADEMIC ACHIEVEMENT AMONG STUDENTS OF COLLEGES OF EDUCATION IN ZAMFARA STATE, NIGERIA

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Abstract
This study investigated relationship between self-evaluation, self-reflection and academic achievement among NCE students in Zamfara state. The correlational research design was used for the study. The population of the study was 9,839 whereas 312 students were selected by means of proportionate stratified random sampling techniques. Two instruments were used for the study. One was an adopted Academic Self-regulated Learning Questionnaire (A-SRL-S) with established content and criterion validity and reliability of 0.84 and 0.70 (Magno, 2011) and the other was Students’ Cumulative Grade point Average (CGPA). Pearson Product Moment Correlation (PPMC) was used to analyze the hypotheses. Findings revealed that, significant relationship exists between self-evaluation as a self-regulated learning strategy and academic achievement among NCE students in Zamfara state at a correlation index of $r = 0.589$. Similarly, significant relationship exists between self-reflection as a self-regulated learning strategy and academic achievement among NCE students in Zamfara state at a correlation index of $r = 0.534$. The researcher therefore recommends that NCE students should always compare their performance with their learning goals through the use of self-evaluation and self-reflection learning strategies which may include self-judgment, goal setting and self-reaction of their own learning in order to maximize their academic achievement.

Keywords: Academic Achievement, Self-evaluation, self-reflection and Self-regulated Learning

Introduction
Education has been viewed as the key component which contributes to an individual’s success in life and this explains why educational systems aim to enable students to acquire knowledge that will make them capable and enthusiastic lifelong learners (Organization for Economic Co-operation and Development, 2008). Thus, if one is expected to be a lifelong learner, then there is the need for learners to develop effective strategies for learning everything. Prior research has found that learning is more likely to be effective where a student plays a proactive role in the learning process. Such a proactive process, including learning on students’ own initiative and strategies, is often described as “self-regulated learning” (SRL). Among various theoretical
orientations, a common conceptualization of a self-regulated learner is someone who is meta-cognitively, motivationally, and behaviorally proactive in his or her own learning. Instead of relying on the help from teachers or parents, self-regulated learners initiate and direct their own efforts to acquire knowledge and skills. Meta-cognitively, they plan, set goals, self-monitor, self-regulate and self-evaluate their learning. Motivationally, they have adaptive beliefs and attitudes that drive them to engage in and endure at academic tasks. Particularly, they are high in self-efficacy and encompass intrinsic task interests (Schunk, 2001; Zimmerman, 2000; Zimmerman, 1989 & Corno, 1986).

Bandura (1986) postulated a theory of student self-regulated learning based on social cognitive theory (SCT). In accordance with Bandura’s description, a distinction is made among personal, environmental, and behavioural determinants of self-regulated learning. Thus, self-regulated learning is not determined merely by personal processes but it is assumed to be influenced by environmental and behavioural events in a reciprocal fashion. The person factor addresses internal factors such as cognitive and personal factors. The behaviour factor addresses the actions of the individual and the environment factor addresses the individual’s setting, situation, and context. For example, a student’s solution response to an academic problem is assumed to be determined not only by personal perceptions of efficacy, preferences, experiences, and abilities but also by such environmental stimuli as encouragement from a teacher and by enactive outcomes, that is obtaining a correct answer to previous problems through asking questions in the class, listening to the lecture, and taking notes. Self-regulated learning fits well with this idea of reciprocal interactions because personal factors, behaviors, and environmental conditions change during learning and must be monitored. Thus, self-regulated learning occurs to the degree that a student can use personal processes to strategically regulate behaviour and the immediate learning environment. The regulation of one’s behaviour such as self-evaluation and self-reflection among others is a feature of SRL that includes the person’s attempt to control his/her external behaviour (Pintrich, 2004).

SRL strategies refer to the actions used by the students to get information, or to the skills that involve organization, purpose and instrumentality perceptions. Seven SRL strategies have been identified to be very important in classroom performance, namely: memory strategy; goal setting; self-reflection; self-evaluation; seeking assistance; environmental structuring; learning responsibility; and planning & organizing strategies (Magno, 2010; Erden & Uredi, 2008; Zimmerman, 1989). This study focuses on the relationship of two out the seven SRL strategies (self-evaluation and self-reflection) and academic achievement.

Self-evaluation refers to a student’s ability to assess his/her own learning; by comparing one’s own performance with his/her learning goals. It includes self-monitoring, self-control, self-judgment, and self-reaction of student’s learning goals. Students who are taught self-evaluation skills are more likely to persist on difficult tasks, be more confident about their ability, and take greater responsibility for their work development through the application of criteria in evaluating current
performance to enable meaningful evaluations. As long as the criteria are appropriately challenging, students are more likely to become self-regulated learners when they are able to evaluate their own learning, independent of teacher-issued summative assessments. This practice enables students to evaluate their learning strategies and make adjustments for similar tasks in their future. Teachers can promote self-evaluation in the classroom by helping students monitor their learning goals and strategy use, and then make changes to those goals and strategies based upon learning outcomes. Students must be able to make adjustments to their work prior to grade valuation. At this point, students react to feedback and adjust their strategies, typically through rubrics, rating forms, or visual organizers. These concrete self-evaluation methods provide objective feedback and identify specific areas of strength or weakness. The feedback serve as a form of item analysis that can be further used to guide instruction and better meet the students’ needs (Rolheiser & Ross in Garba, 2016; Winne & Hadwin in Garba, 2016; (Zimmerman, 2000).

Self Reflection refers to the process which occurs following the performance effort. It has an impact on the response of students to that experience (Ommundsen & Lemyre, 2007). Self-reflection includes self-judgment and self-reaction (Bembenutty, 2011). If one’s performance is compared against one’s goals, it is called self-judgment (Zimmerman, 1989). Self-Reflection helps students think about what they know or have learned while they identify areas of confusion, so they can create new goals. Evaluating what they learned, what they still need to work on, and how they can get there can all support deeper understanding rather than superficial knowledge. Students benefit from explaining their work and their own evaluation of quality through reflective activities such as conferences, written correspondence with parents or peers, and written self-reflections or checklists.

Statement of the Problem
Teaching over the years had been by lecture method, demonstration and other non-pragmatic methods which were teacher dominated and encouraged, rote learning, memorization and regurgitation of facts by students just to pass examinations. Consequently, this led to poor academic achievement, underachievement and inability of NCE students to apply the knowledge and teaching skills acquired through rote learning into their teaching experiences. The National certificate in Education (NCE) was considered minimum requirement for teaching in Nigeria since 1980. Thus, NCE Students are trained as teachers who should be active learners that will learn to comprehend knowledge and skills that will enable them teach effectively and not aspiring to just pass examination through rote learning.

Poor academic achievement and underachievement as well as inability of NCE graduates to apply teaching skills into working places among students of colleges of Education in Zamfara State results to loss of many rewarding life opportunities by both the individual learner and the society. The learners taught by such NEC graduates end up being poor academic achievers who may miss the opportunity to aspire for further education and thus, lack capabilities and enthusiasm for being lifelong learners. In the long run, the society suffers lack of enough skilled and qualified teachers
needed to educate and lay solid foundation to both primary and secondary pupils needed to meet the demands of the state for national development. That is why the entire stakeholders in education ranging from school administrators, teachers, lecturers and the parents have been complaining about the poor performance of NCE students (both graduate and trainees) in teaching at both preprimary, primary and secondary schools.

Generally, when students experience problems with their academic work, they may ascribe such to their own lack of cognitive abilities. However, the actual problem may be that they lack the knowledge of how to learn effectively. For effective learning to take place, learners need to have and make use of Self-Regulated Learning strategies that include self-evaluation and self-reflection. Thus, this study sets out to find out the relationship between self-evaluation and self-reflection: self-regulated learning strategies and academic achievement among NCE students in Zamfara State.

**Research Questions**

1. What is the relationship between Self-Evaluation and Academic Achievement of students of Colleges of Education in Zamfara?
2. What is the relationship between Self-Reflection and Academic Achievement among students of Colleges of Education in Zamfara?

**Research Hypotheses**

1. There is no significant relationship between Self-Evaluation and Academic Achievement among students of Zamfara Colleges of Education.
2. There is no significant relationship between Self-Reflection and Academic Achievement among students of Colleges of Education in Zamfara.

**Review of Empirical studies**

Dereje (1997) carried out a study to investigate relationships between motivational beliefs, strategies of self-regulated learning strategies components and Academic Achievement of elementary school students in Awassa, Ethiopia. The sample consisted of students from grades 5, 6, 7 and 8. A total of 680 students were randomly selected from three different 2nd cycle elementary schools. The findings indicated strong relationship between the use of cognitive strategies of self-evaluation and Academic Achievement and between self-reflection and Academic Achievement.

Zimmerman and Martinez-Pons (1988) explored the relationship between the SRL strategies reported by high school students and the SRL performance observed by their teachers. Findings indicate that there is a relationship between the ratings provided by teachers with the reports given by students of their use of SRL strategies. The SRL strategies of rehearsing, organizing, and self-reflection were the strategies that correlated the most with the teachers’ ratings. Hence, good self-regulated learners use self-regulated strategies to perform their classroom activities (Zimmerman & Martinez-Pons, 1988).

A study was conducted on self-regulated learning strategies and academic achievement. The findings indicated that there was a strong positive correlation between SRL strategies of self-
evaluation and academic achievement (Valle, Núñez, Cabanach, González-Pienda, Rodríguez, Rosário, Muñoz-Cadavid & Cerezo, 2008). Similarly, students write more effectively (with regard to how they prepare informative papers and organize papers), and thus achieve higher grades in writing when they employ one or more of the 10 major types of self-regulatory strategies, namely environmental structuring, self-selected models, tutors, books, self-reflection, self-evaluation of the consequences, self-verbalisation, time planning and management, goal-setting, the setting of self-evaluative standards, and using cognitive strategies and employing mental imagery (Zimmerman & Risemberg, 1997).

Methodology
The research design that was adopted for this study was correlation. The population for this research was students of Colleges of Education in Zamfara state for 2014/2015 academic session. In all, there were two Colleges of Education in Zamfara state, namely: Zamfara State College of Education, Maru with a total population of 6,948 (males and females) students and Federal college of education (Technical), Gusau with a total population of 2,891 (females). All the two colleges had a total population of 9,839 made up of 5,200 males and 4,639 females. Only NCE III students were used for the research. The target population therefore, was 3,741 students.

Proportionate stratified random sampling was employed in this study. In proportionate stratified random sampling technique; the sample size of each stratum is proportionate to the population size of the stratum when viewed against the entire population. Thus, the frame of the population is organized into separate strata at the school level and gender. In each stratum, a sample of the individual participants was selected randomly but proportionately for fair representation. This is according to Korb, (2012) who opined that, in educational research, stratified random sampling is typically used when the researcher wants to ensure that specific subgroups of people are adequately represented within the sample. The sample consisted of 312 participants obtained from a population of 3,741 NCE III students of both Colleges. This is in line with Krejcie and Morgan, (1970) table for determining sample size.

A questionnaire consisting of two parts was employed for the study. Part one consists of Bio-data items such as gender, age, school and CGPA. Part two was subsection of a scale known as the Academic Self-Regulated Learning Scale (A-SRL-S) adopted and used for this study. A-SRL-S was developed by (Magno, 2010). The A-SRL-S is a subscale where 12 items are classified under self-evaluation and self-reflection each. The items were rated on four point where 1 = strongly disagree up to 4 = strongly agree. The minimum and maximum scores a respondent would obtain were 12 and 48 respectively. Scores falling 12 to 23 indicated low level of Self-evaluation or self-reflection while scores ranging from 24 to 35 and 36 to 48 represented average and high levels of self-evaluation and self-reflection respectively. The dependent variable is the student’s academic achievement which was measured in terms of student’s CGPA.

Experts in the field of educational psychology at Ahmadu Bello University, Zaria established face and content validity of the instrument and found it appropriate for use in this study. The reliability
of the subscales measuring self-evaluation and self-reflection strategies of self-regulated learning as reported by Magno (2011) were 0.83 and 0.70 respectively.

Results

**Hypothesis One:** There is no significant relationship between self-evaluation and academic achievement of students of Colleges of Education in Zamfara.

**Table 1: Analysis on relationship between self-evaluation and academic achievement of students of Colleges of Education in Zamfara State**

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>r-value</th>
<th>Sig. of r-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-reflection</td>
<td>312</td>
<td>34.9872</td>
<td>7.56365</td>
<td>0.589**</td>
<td>0.000</td>
</tr>
<tr>
<td>Academic achievement</td>
<td>312</td>
<td>2.7288</td>
<td>.93020</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Correlation is significant at the 0.005 level.

From table 1 above, it can be observed that significant relationship exist between self-evaluation and academic achievement of students of Colleges of Education in Zamfara State. This is because the calculated significant (p) value of 0.000 is lower than the 0.005 alpha level of significance at a correlation index r level of 0.589. This shows that self-evaluation as self-regulated learning strategy significantly relates to academic achievement among Colleges of Education students in Zamfara State. Therefore the null hypothesis which states that There is no significant relationship between self-evaluation and academic achievement of students of Colleges of Education in Zamfara State, is hereby rejected.

**Hypothesis Two:** There is no significant relationship between self-reflection and academic achievement of students of Colleges of Education in Zamfara.

**Table 2: Analysis on relationship between self-reflection and academic achievement among students of Colleges of Education in Zamfara state**

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>r-value</th>
<th>Sig. of r-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-reflection</td>
<td>312</td>
<td>22.8558</td>
<td>4.7903</td>
<td>0.534**</td>
<td>0.000</td>
</tr>
<tr>
<td>Academic achievement</td>
<td>312</td>
<td>2.7288</td>
<td>.93020</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.05 level (2-tailed).**

The above Pearson Product Moment Correlation statistics revealed that significant relationship exists between Self-reflection and academic achievement of Colleges of Education students in Zamfara state. This is because the calculated significant (p) value of 0.000 is lower than the 0.05 alpha level of significance at a correlation index of r = 0.534. This shows that Self-reflection as a self regulated learning strategy significantly relates with academic achievement of Colleges of Education students in Zamfara state. Therefore the null hypothesis which states that there is no
significant relationship between Self-reflection and academic achievement among students of Colleges of Education in Zamfara state, is hereby rejected.

Discussion of the Results
The present study was designed to find out the relationships among self-evaluation, self-reflection and academic Achievement of Students of Colleges of Education in Zamfara State, Nigeria. Thus, the findings of this research indicated that self-evaluation had significant correlation with academic achievement. This agrees with Zimmerman and Martinez-pons (2011) findings which indicated that gifted youngsters reported a greater use of self-evaluation and self-reflection strategies than students from regular schools. Similarly, Valle, Núñez, Cabanach, González-Pienda, Rodríguez, Rosário, Muñoz-Cadavid & Cerezo, (2008) reported positive correlation among self-evaluation and self-reflection and academic achievement. The findings of this study also agree with that of Dereje (1997) who reported positive correlation between self-evaluation and academic achievement. However, Purdie and Hattie (2016) in their study reported that self-evaluation was among the least important SRL strategies. Similarly, the findings of this research indicated that self-reflection had significant correlation with academic achievement. The findings of this study again agree with Zimmerman & Rissemberg, 1997 who found that students achieve higher in writing when they employ one or more of the ten SRL strategies.

Conclusions
The study concluded that significant relationship exists among self-evaluation, self-reflection and student academic achievement of Students of Zamfara Colleges of Education. Thus, for students to maximize their academic achievement they therefore should adopt self-evaluation and self-reflection SRL strategies in order to maximize academic achievement.

Recommendations

1. The researcher recommends that NCE Students should always compare their performance with their learning goals through the use of self-evaluation and self-reflection learning strategies which may include self-monitoring, self-control, self-judgment, and self-reaction of their own learning in order to maximize their academic achievement and realization of goal orientation.

2. Psychologists, counselors, parents and Lecturers should sensitize and inculcate in their students/words on the importance and value of acquiring meaningful knowledge and maximization of academic achievement through the adoption of self-evaluation and self-reflection learning strategies.

References


